

ABSTRACT

A radar system transmits a beam of detection radio waves with a predetermined azimuth width, receives a reflected wave from a target, changes a central azimuth of the beam, and detects the distribution of reception signal strengths at predetermined angular intervals and for each predetermined distance. Then, when the reception signal strength distribution associated with changes in azimuth is expressed in rectangular coordinates, an azimuth corresponding to a vertex of an isosceles triangle that approximates the reception signal strength distribution and has an azimuth width, which is determined by the beam azimuth width, as its base is detected as the central azimuth of the target. Thus, the radar system becomes capable of detecting the azimuth of a target at a resolution capability higher than in the case where the movement of a target cannot be detected at a resolution equal to or less than the beam width of detection radio waves, and higher than in the case where a resolution in the azimuth direction is determined by the sampling interval in the azimuth direction. Moreover, the problem of deviation of the peak position of a reception signal strength from the center of a target can be solved.